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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/054,173

01/18/2002

Brian J. Malone

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7590

11/24/2004

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EXAMINER

CHOI, JACOB Y

ART UNIT

PAPER NUMBER

2875

DATE MAILED: 11/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/054,173	Applicant(s) MALONE ET AL.	
	Examiner Jacob Y Choi	Art Unit 2875	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6, 8-10, 12-23, 25, 26, & 28-34 is/are pending in the application.
- 4a) Of the above claim(s) 6 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 8-10, 12-23, 25, 26 and 28-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01/18/2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. Any structural detail that is of sufficient importance to be described should be shown in the drawing (Ex parte Good, 1911 C.D. 43, 164 O.G. 739 (Comm'r Pat. 1911).) See MPEP 608.02. Therefore, applicant needs to shows a plurality of compartments, each compartment being generally concave, the conductive material and reflective coating are formed on the substrate within the same vacuum chamber, & the conductive material and reflective coating are formed on the substrate simultaneously in the same vacuum chamber.

Claim Objections

2. The amendment filed 08/28/2003 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention.

The added material which is not supported by the original disclosure is as follows: the lamp housing is comprised of thermoplastic material, a plurality of compartments, each compartment being generally concave, the conductive material and reflective coating are formed on the substrate within the same vacuum chamber, & the conductive material and reflective coating are formed on the substrate simultaneously in the same vacuum chamber.

3. Claim 6 is objected to under 37 CFR 1.75(c) as being in improper form because the claim depends on canceled claim 11. See MPEP § 608.01(n). Accordingly, the claim 6 is not been further treated on the merits.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 31-34 are rejected under 35 U.S.C. 112 first paragraph, as failing to comply with written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the art that the inventor(s), at the time the application was filed, has possession of the claimed invention. Currently amended claims 31-34 contains limitations of *"the lamp housing is comprised of thermoplastic material, a plurality of compartments, each compartment being generally concave, the conductive material and reflective coating are formed on the substrate within the same vacuum chamber, & the conductive material and reflective coating are formed on the substrate simultaneously in the same vacuum chamber"* where originally filed specification do not reasonably supports.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-5, 8-10, 12-23, 25, 26, & 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over either applicant's admitted prior art (figures 1-5) or Suzuki et al. (USPN 6,290,380) in view of Elarde (USOPN 4,532,152).

Regarding claims 1, Either applicant's admitted prior art or Suzuki et al. discloses the printed circuit board being utilized for a vehicle lamp housing and the conductive material is connected to at least one or more light source(s) and its power source(s). Elarde teaches a method of manufacturing a printed circuit board comprising a depositing particles by direct metallization to form a layer of conductive material on a contoured surface of a substrate that forms part of the circuit board, in order to form part of one or more electrical spray circuits (claim 1, 14, & 15). Either applicant's admitted prior art or Suzuki et al. discloses the claimed invention except for the various well known method of depositing particles to form a layer of conductive material on a substrate. It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize well known method of manufacturing a printed circuit board on a substrate/other suitable high temperature plastics (column 9, 60-65 of Elarde) on the lamp housing as taught by either applicant's admitted prior art or Suzuki

et al. in order to provide conductive circuitry and connection to the light source(s) and its power source(s).

Note: claims in a pending application should be given their broadest reasonable interpretation. *In re Pearson*, 181 USPQ 641 (CCPA 1974).

Contoured - The outline of a figure, body, or mass.

Regarding claims 2-5, either applicant's admitted prior art or Suzuki et al. in view of Elarde discloses the claimed invention, explained above. In addition, Elarde discloses the direct metallization deposition of the layer of conductive material is deposited by vacuum deposition in a vacuum chamber (flame spraying, a combination of electro less plating, electroplating, gas plating). Elarde does not specifically teach other depositing methods on the layer of conductive material, however, on page 6-7, originally filed applicant's specification states that "spray circuit is applied to inner surface of housing by *one of various known methods* of vacuum deposition ... the LEDs are then soldered in place using *known methods* such as convection reflow ... etc.

Regarding claim 8 either applicant's admitted prior art or Suzuki et al. in view of Elarde discloses the claimed invention, explained above. In addition, Elarde discloses a step of forming distinct electrical pathways in the layer of conductive material during deposition.

Regarding claim 9, either applicant's admitted prior art or Suzuki et al. in view of Elarde discloses the claimed invention, explained above. In addition, Elarde discloses the distinct electrical pathways are formed (coat of brass, thin brass plus electro less

copper, or electro less copper plus electroplated copper) by masking the lamp housing prior to deposition of the layer of conductive material on the lamp housing.

Regarding claim 10, either applicant's admitted prior art or Suzuki et al. in view of Elarde discloses the claimed invention, explained above. In addition, Suzuki et al. discloses depositing a reflective coating on the substrate (30).

Regarding claim 12, either applicant's admitted prior art or Suzuki et al. in view of Elarde discloses the claimed invention, explained above. In addition, Elarde discloses a step of applying a spray seal on the substrate (additional layer; figures 14, 15, 18, 19, 21, 22).

Regarding claim 13, either applicant's admitted prior art or Suzuki et al. in view of Elarde discloses the claimed invention, explained above. In addition, Elarde discloses a step of applying a protective coating to the conductive material (additional layer; figures 14, 15, 18, 19, 21, 22).

Regarding claim 14, either applicant's admitted prior art or Suzuki et al. in view of Elarde discloses the claimed invention, explained above. In addition, Elarde discloses the step of depositing a conductive layer further comprises depositing one or more terminals.

Regarding claim 15, either applicant's admitted prior art or Suzuki et al. in view of Elarde discloses the claimed invention, explained above. In addition, Elarde discloses the step of depositing a conductive further layer comprises a depositing at least one connection for electrically connecting the conductive layer.

Regarding claim 16, either applicant's admitted prior art or Suzuki et al. clearly discloses a conductive layer (figure 4) for one or more electrical circuits deposited directly (figure 3) on the substrate. Suzuki et al. discloses the claimed invention except for the conductive layer is 1 to 4 microns thick. Elarde teaches that the depth of the conductive layer is approximately 0.003-0.010. It would have been obvious to one having ordinary skill in the art at the time the invention was made to specify workable range of the conductive layer on the substrate, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Note: it has been held that omission of an element and its function in a combination where the remaining elements perform the same functions as before involves only routine skill in the art. *In re Karlson*, 136 USPQ 184.

Regarding claim 17, either applicant's admitted prior art or Suzuki et al. in view of Elarde discloses the claimed invention, explained above. The method of forming the device is not germane to the issue of patentability of the device itself. Therefore, this (conductive layer is formed by vacuum deposition of the electrical circuits on the substrate) limitation has not been given patentable weight.

Regarding claim 18, either applicant's admitted prior art or Suzuki et al. in view of Elarde discloses the claimed invention, explained above. In addition, Suzuki et al. disclose the conductive layer is directly embedded in the substrate.

Regarding claim 19, either applicant's admitted prior art or Suzuki et al. in view of Elarde discloses the claimed invention, explained above. In addition, Suzuki et al. disclose one or more openings in the lamp housing for one or more light sources.

Regarding claim 20, either applicant's admitted prior art or Suzuki et al. in view of Elarde discloses the claimed invention, explained above. In addition, Suzuki et al. disclose one or more terminals attached to the conductive layer at the openings.

Regarding claim 21, either applicant's admitted prior art or Suzuki et al. in view of Elarde discloses the claimed invention except for the light sources comprise one or more light emitting diodes. It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilized LEDs rather than incandescent lamps, since the examiner takes Official Notice of the equivalence of LEDs and incandescent lamps for their use in the vehicle lamp and the selection of any of these known equivalents would be within the level of ordinary skill in the art.

Regarding claim 22, either applicant's admitted prior art or Suzuki et al. in view of Elarde discloses the claimed invention, explained above. In addition, Suzuki et al. disclose the light source comprise one or more incandescent lamps.

Regarding claim 23, either applicant's admitted prior art or Suzuki et al. in view of Elarde discloses the claimed invention, explained above. In addition, Suzuki et al. disclose further comprising a reflective coating.

Regarding claim 25, either applicant's admitted prior art or Suzuki et al. in view of Elarde discloses the claimed invention, explained above. In addition, Suzuki et al. disclose further comprising a seal.

Regarding claim 26, either applicant's admitted prior art or Suzuki et al. in view of Elarde discloses the claimed invention, explained above. In addition, Suzuki et al. disclose further comprising a protective coating on the conductive layer.

Regarding claim 28, either applicant's admitted prior art or Suzuki et al. in view of Elarde discloses the claimed invention, explained above. In addition, Suzuki et al. disclose further comprising a single connection for electrically connecting the circuits to one or more power sources.

Regarding claim 29, either applicant's admitted prior art or Suzuki et al. in view of Elarde discloses the claimed invention, explained above. In addition, Suzuki et al. disclose the housing comprises one or more molded channels to facilitate receipt of the conductive layer.

Regarding claim 30, either applicant's admitted prior art or Suzuki et al. in view of Elarde discloses the claimed invention, explained above. In addition, Suzuki et al. disclose the housing comprises one or more smooth corners to facilitate receipt of the conductive layer.

Response to Arguments

8. In view of the Appeal Brief filed on August 20 2004, PROSECUTION IS HEREBY REOPENED. new grounds of rejections are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

9. Applicant's arguments, see pages 6-7, filed August 20 2004, with respect to claims 1-6, 8-10, 12-23, 25, 26, & 28-34 have been fully considered and are persuasive. The rejection of Final Office Action filed on 01/18/2002 has been withdrawn regards following claims.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the criticality of follow feature(s) (i.e., conductive layer is 1-4 microns thick) are not demonstrated in the originally filed specification. When relative terms are used in claims wherein the improvement over the prior art rests entirely upon size or weight of an element in a combination of elements, the adequacy of the disclosure of a standard is of greater criticality. The examiner has applied the law (*In re Aller*, 105 USPQ 233) consistently to the application and the facts in a prior legal decision are sufficiently similar to those in an application under examination. Therefore, it is proper for the examiner to apply the law case considering all the relevant facts.

Note: the applicant has failed to demonstrate the criticality of a specific limitation


Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacob Y Choi whose telephone number is (571) 272-2367. The examiner can normally be reached on Monday-Friday (10:00-7:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on (571) 272-2378. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JC


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